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ARTISAN ELECTRONICS CORPORATION

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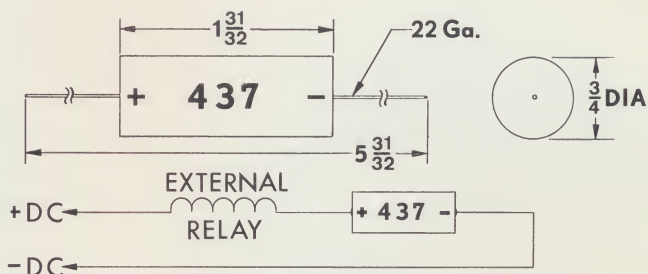
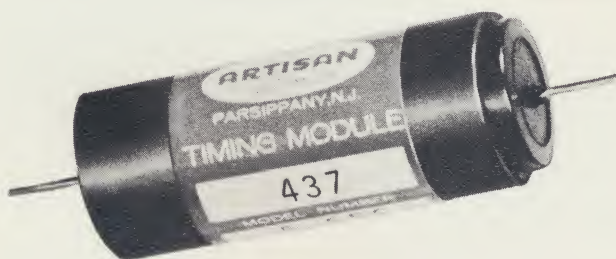
COMPACT, SOLID STATE TIMING DEVICE

MODEL 437

DESCRIPTION

The Model 437, a small, cylindrical all solid state timing device, is an entirely new approach to serving the needs of the military and industry. It should find application wherever the utmost in economy is necessary for a delay on pull-in fixed timing unit operating from 24 V to 120 VDC, without selection, and from any range between .025 and 300 seconds. They offer miniaturization, accuracy, fast reset time, high ambient operation and a full two ampere solid state output capability. Where larger loads must be handled its axial lead construction may easily be inserted in series with a relay coil for whatever switching amplification is required. In effect, when this device is combined with a relay, a complete time delay relay is created for a portion of the price of currently available comparable units.

Typical applications would include solving relay race problems, automation circuits, solenoid valve sequencing, motor controllers or protection, delaying high voltage, automatic filling, dispensing or processing, computers, navigation and guidance systems, instruments and controls, fuzing and arming, communications equipment, welding, photographic sequences, injection molding, transmitter and X-ray warm up and wherever low cost, long life and small size are required.



SPECIFICATIONS

Operating Voltage: 24 VDC to 120 VDC without selection

Output: Two ampere inductive max, 4 ma min

Off Resistance: 10 K ohms minimum

On Voltage: 1.5 volts maximum

Time Delay Mode: Delay on Pull In

Time Delay Range: Fixed from .025 to 300 seconds

Timing Repeatability: $\pm 3\%$ at any operating voltage or temp. within specification limits

Timing Variation: $\pm 20\%$ over entire voltage and temp. range

Reset Time: 10 milliseconds

Recycle Time: 50 milliseconds

Operating Temperature: -10°C to $+85^{\circ}\text{C}$

Vibration*: 15 g's from 10 to 2,000 cps.

Shock*: 50g's for 11 ± 1 ms.

Acceleration*: 10 g's any axis

Altitude: Sea level to 50,000 feet.

Insulation Resistance: 500 megohms at 500 VDC

Dielectric Strength: 1,000 V-rms between a terminal and case.

Will withstand 100% RH, salt spray, sand dust, and is fungus proof.

*when suitably mounted

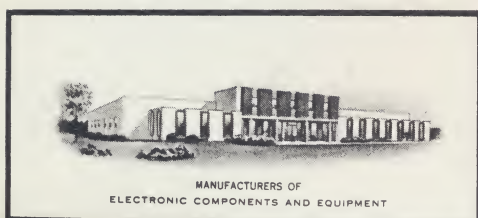
ORDERING INFORMATION

When ordering specify Model 437 - delay in seconds. Ex. 437 - .075 is a 75 millisecond unit.

Standard ranges normally available from stock are 1, 5, 10, 60, 100 and 180 seconds. Any other range available providing order is for a minimum of 50 pieces.

PRICING

1 to 24 pieces - \$ 5.75 each; 25 to 99 pieces - \$ 5.50 each 100 and up pieces - Refer to Factory.



ARTISAN ELECTRONICS CORPORATION

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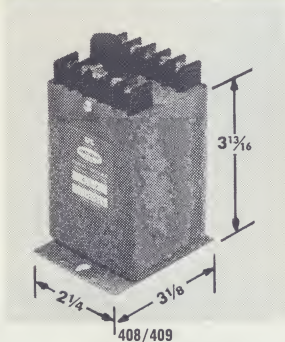


Condensed Bulletin *Components & Equipments*

ENGINEERING AND PRODUCTION SPECIALISTS

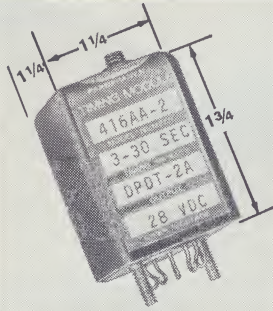
Electronic Timing Devices / Relays, Solenoids / Communication and Control Subassemblies

ELECTRONIC TIMING DEVICES



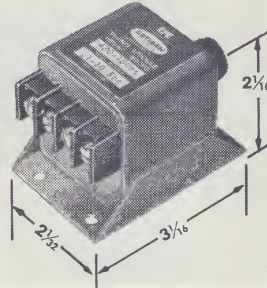
408/409

Industrial Time Delay Relays — adjustable, rugged and highly accurate — operating from 115 VAC as a delay on pull in (408) or a delay on drop out (409). Adjustable ranges of .025 to 2.5 seconds, 2.5 to 25 seconds, 10 to 100 and 20 to 300 seconds. Timing repeatability is $\pm 1\%$. **Bulletin T 208.**



416/476

Universal military timing unit with an internal relay output (416) or solid state output (476). Both have various mounting configurations, adjustment capabilities (delay range of 30 milliseconds to 300 seconds) and are supported by an independent testing laboratory's detailed reliability report. **Bulletin T 206.**



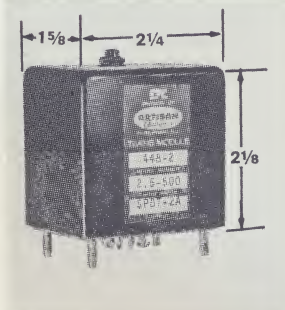
420/421

All solid state flasher/delay module. Adjustable unit capable of switching the full AC supply to the load as a 50% duty cycle flasher (420), or at the end of an adjusted delay period (421). **Bulletin T 205.**



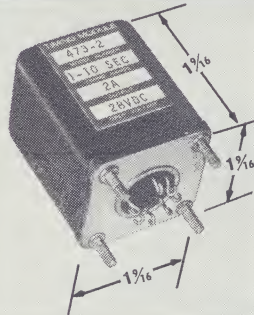
428

Industrial TDR, featuring the optimum in economy and flexibility. Various fixed or adjustable timing ranges and 2% repeat accuracy. **Bulletin T 204.**



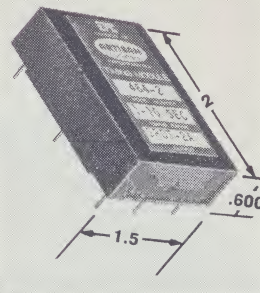
448

Adjustable time delays to 500 seconds, operating from 18 to 32 VDC, and capable of either a delay on pull in or a delay on drop out in the same application. **Bulletin T 209.**



473

Solid state flasher, 24 to 32 VDC, with capability of externally controlling both "ON" and "OFF" periods, and flashing under a no load condition. **Bulletin T 207.**



484

Summation timing module, which accumulates time until the input time is equal to a pre-set delay when its relay contacts transfer. **Bulletin T 203.**

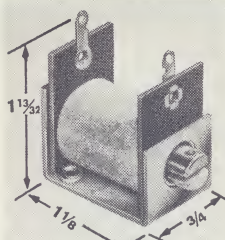
SPECIALS

The production of special timing devices to customer specifications is "state of the art" at Artisan and, in most cases, prices of custom models are no greater than those for stock items.

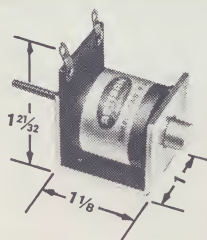
Bulletin T210.

SOLENOIDS

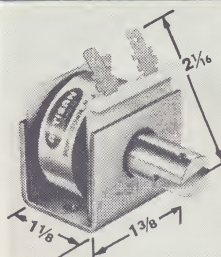
Light weight, compact solenoids utilize the economical U frame design for both continuous and intermittent duty. They are ideal for AC (to 220V) and DC (to 110V) applications in automatic equipment requiring up to twenty pounds force, such as vending machines, recording equipment and business machines. Can be furnished for high temperature ambients and in a wide range of plunger styles. Suffix A denotes pull type, G, push type. **Bulletin S 401.**



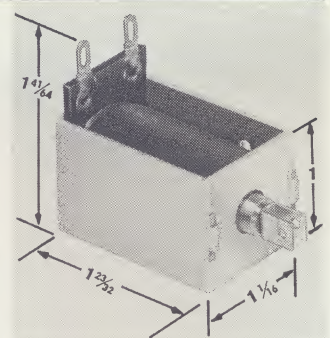
DSA, DSG



BRA, BRG



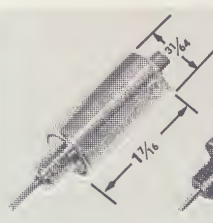
KLA, KLG



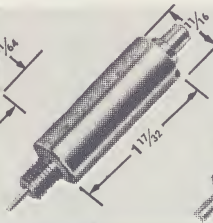
FA

Box frame solenoid specifically designed for efficient DC operation up to 110 volts. Actuator forces from 7 ounces at 3/4" stroke to 125 ounces seated. Intermittent and continuous duty forces proportionally less. **Bulletin S 403.**

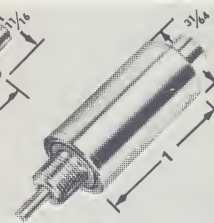
Cylindrical solenoids offering close spacing and extra long life for both continuous and intermittent duty, these miniature solenoids are used where size and forces required are less than 50 ounces. Their applications include data processing equipment, such as tape-fed automatic operation of business machines, pen-lifting duties on chart recorders and flag-raising on instrument panels for warning purposes. Operation to 125 VDC. Available with threaded bushing or "C" ring mounting. **Bulletin S 402.**



EL, ELA

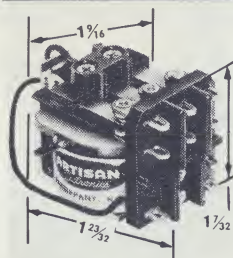


EP, EPA

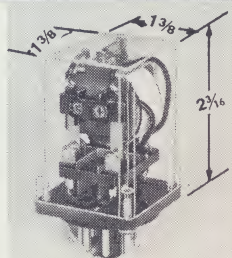


EH

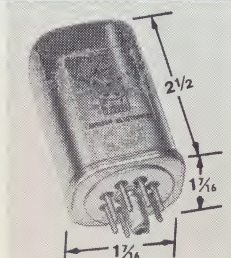
ELECTROMECHANICAL RELAYS



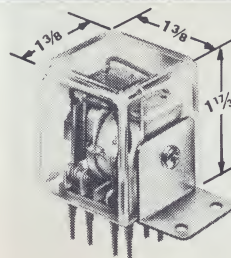
RE



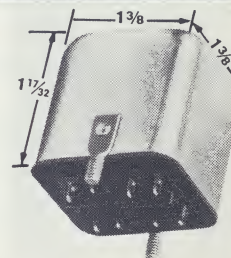
REP



REH

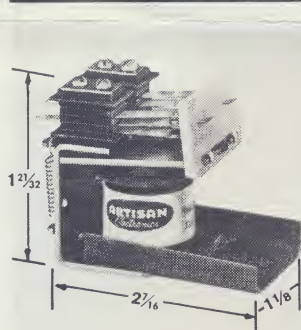


REKT

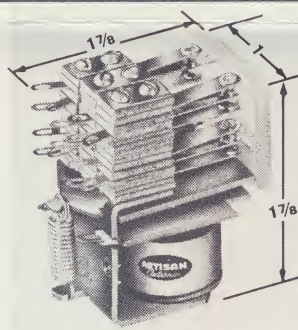


RED

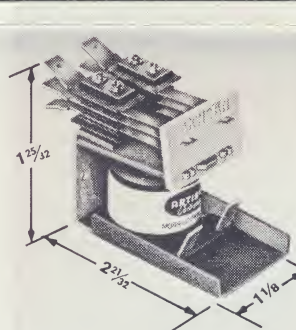
General purpose relays designed for low cost, dependable switching of control circuits. Small, rugged, highly efficient with switching capacity to 10 amps and 3 PDT contact configuration. Available with hermetically sealed, plastic or metal plug enclosures; metal dust covers for chassis mounting; solder lug, quick disconnect and printed circuits board terminals and any coil voltage. **Bulletin R 301.**



RH



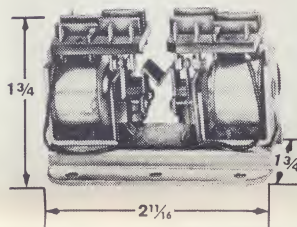
RHR



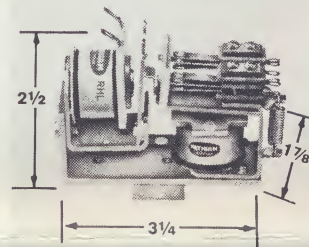
RHQ

Specifically designed for maximum economy, these units are slightly larger and less sensitive than the RE Series, but feature 10 amp standard contacts (15 amperes available) and any combination of contact configurations through 9 PDT. This all-purpose component employs a nylon blade lifter that assures dependable operation. Also, metal and hermetically sealed enclosures and other quick disconnect (.110, .187 & .250) terminations are available. **Bulletin R 302.**

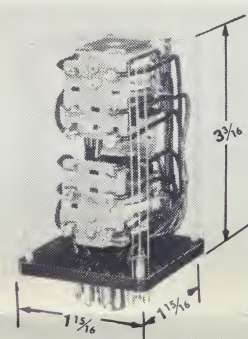
Mechanical latching relays mounted on a common plate. Either relay when momentarily energized is mechanically held by the other. Used for ON-OFF switching, power reversal and similar applications with either identical or different voltages for each coil. Model REL would be standard unit without enclosure and capable of up to 3 PDT contacts on each relay while the RHL is capable of up to 6 PDT on one relay. **Bulletin R 303.**



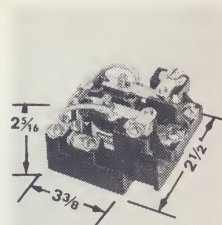
REL



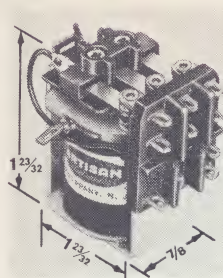
RHL



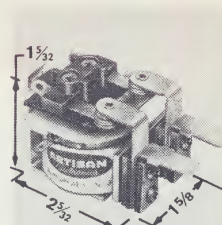
ROLP



PJ



RS

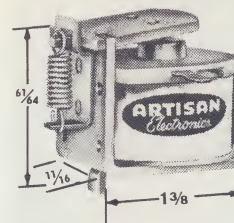


RB

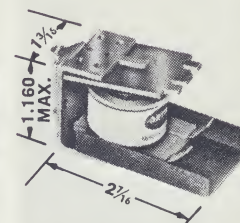
A power relay engineered for extra long life at loads to 25 amperes with DPST or DPDT contact configuration. Operates from any voltage to 240 volts AC or DC. 110 volts AC in Stock. **Bulletin R 304.**

Sensitive economical relay shown offers 60 milliwatts per pole (1, 2 or 3 Form "C" available) as standard and to 25 mw/pole special. Model PE (plate circuit unit similar to RE at top) offers 125 mw/pole standard and to 90 special. **Bulletin R 305.**

This single pole, single throw, normally closed double break (Form Y) is a compact, economical unit rated at 30 amperes at 30 VDC or 115 VAC and is specifically designed for emergency lighting use. Available with dust-proof enclosure. Coil voltages to 110 VDC or 240 VAC. **Bulletin R 306.**



RC



RM

Actuators offering life of 5 million operations at forces of 2 to 5 ounces on RC and 4 to 20 ounces on RM at a stroke of .080" depending on duty cycle and AC or DC operation. Coil voltages to 110 VDC or 240 VAC. Higher forces at shorter strokes; solder lugs or quick disconnect terminals available. **Bulletin A 501.**

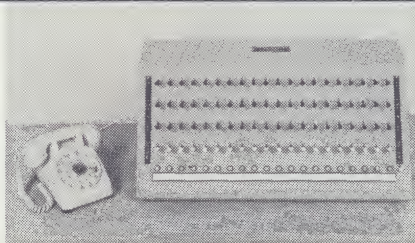
COMMUNICATION & CONTROL EQUIPMENT

Artisan's broad capabilities in the communication and control areas allow the company to operate competitively for subcontracts that support total systems contracts in all markets. We invite your specifications and requirements. The following are standard products and representative of this capability.



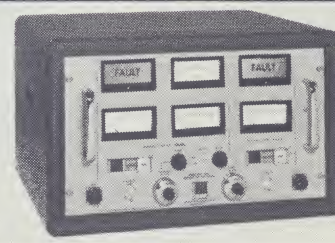
10643

This communications system provides voice communication between up to ten remotely located stations for military and heavy duty industrial applications. Fits into existing PA systems. Frequency range 300-5000 Hz; less than 10 watts per station power required; operating voltage 24 VDC $\pm 10\%$. **Bulletin CC 604.**

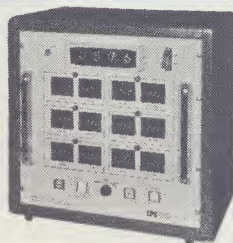


Cordless Switchboard.

A four-wire model originally designed and manufactured for the Caribbean Communications System, and installed in the Panama Canal Zone.



This **Contact Chatter Tester** is used as test equipment for monitoring contact chatter as specified in MIL-STD-202, Method 310. Range adjustable from 1 microsecond to 100 microseconds for both normally closed and normally open contact chatter testing. Each channel operates a SPDT set of relay contacts that handles 5 amps at 115 VAC resistive. Operating voltage, 105-130 VAC, 60H. **Bulletin CC 602.**



EPC 10397 — Programmer

This programmer is used for the complete automatic control of processes, simulation, laboratory experiments or any equipment requiring flexibility in program changes. This unit independently or sequentially controls 6 different events from the start of a program to a maximum of 999.9 seconds. Each event may be pre-set by a 4-digit thumb wheel switch on the front panel for automatic turn-on and turn-off operation. Timing resolution, 0.1 second; operating voltage 105-130 VAC (60 cycles). **Bulletin CC 601.**



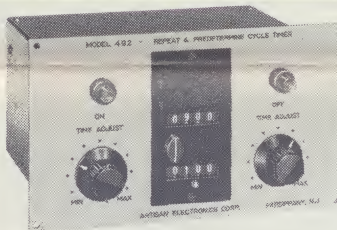
7007C — Annunciator

This 30-channel all solid state alarm indicator/annunciator is designed especially for detecting and isolating failures, abnormal conditions or malfunctions in a wide range of electronic and similar equipments. Features a completely wired chassis and a partial number of interchangeable modules for initial economy and future expansion. 40 watts maximum power required; operates from 115 VAC, with other voltages available. **Bulletin CC 603.**



490 — Digital Timing Control

A revolutionary digital timing control permitting easy selection of any required time delay range from 0.1 sec. increments with extreme accuracies and at an economical price. This device is a completely solid state digital timing control capable of delay on pull in or delay on drop out through a SPDT relay with a 5 amp output, resistive at 115 VAC. Power required, 1 watt max.; operating voltage, either 6 VAC or 6 VDC in same standard unit. 115 VAC available. **Bulletin CC 605.**



492 — Repeat and Predetermine Cycle Timer

This unit combines a repeat cycle timer (with adjustable "ON" and "OFF" time) and a predetermine counter for setting of the required number of cycles. The period of the repeat cycle time is adjustable, in 3 ranges, from 0.1 seconds to 300 seconds, through two front panel controls. Relay output, DPDT rated 10 amps resistive @ 120 VAC; timing repeatability, $\pm 1\%$; operating voltage, 105-130 VAC, 60 Hz, at 20 V.A. **Bulletin CC 606.**



493 — Digital Timer

This model is a true time delay device capable of having a predetermined delay, in seconds, set manually and digitally into the timer. It features digital control and display of pre-set time, indications of elapsed time or time delay period remaining, and maintains memory if power should fail. Output, SPDT contacts rated at 1 amp @ 115 VAC or 1/2 amp @ 110 VDC resistive; timing range 1-99, 999 seconds; operating voltage, 24 to 32 VDC at 100 milliamperes maximum. **Bulletin CC 607.**

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